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1. What is the pressure of a mixture of CO₂, SO₂, and H₂O gases, if each gas has a partial pressure of 25 kPa?
- A) 25 kPa B) 50 kPa
C) 75 kPa D) 101 kPa
2. Gas samples *A*, *B*, and *C* are contained in a system at STP. The partial pressure of sample *A* is 38.0 kPa and the partial pressure of sample *B* is 19.0 kPa. What is the partial pressure of sample *C*?
- A) 19.0 kPa B) 38.0 kPa
C) 44.3 kPa D) 63.3 kPa
3. The partial pressures of gases *A*, *B*, and *C* in a mixture are 0.750 atmosphere, 0.250 atmosphere, and 1.25 atmospheres, respectively. What is the total pressure of the gas mixture in kPa?
- A) 2.25 kPa B) 202 kPa
C) 228 kPa D) 301 kPa
4. A mixture of oxygen, nitrogen, and hydrogen gases exerts a total pressure of 74 kPa at 0°C. The partial pressure of the oxygen is 20 kPa and the partial pressure of the nitrogen is 40 kPa. What is the partial pressure of the hydrogen gas in this mixture?
- A) 14 kPa B) 20 kPa
C) 40 kPa D) 74 kPa
5. A mixture of gases has a total pressure of 200 kPa. The mixture contains 8 moles of nitrogen gas and 2 moles of oxygen gas. What pressure is exerted by the oxygen gas molecules?
- A) 20 kPa B) 40 kPa
C) 200 kPa D) 400 kPa
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